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NASA CR100156

QUARTERLY STATUS REPORT

July-September 1968
October-December 1968

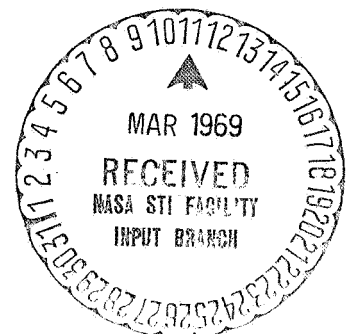
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Technology Application Center
The University of New Mexico
Albuquerque, New Mexico

William A. Shinnick
Director

NASA Contract
NSR- 32-004-049

February 1969



SUMMARY

This report covers the first two quarters of TAC's fiscal year, July-September, 1968, and October-December, 1968.

Effective July 1, 1968, TAC became a division of a new University of New Mexico organization, the Institute for Social Research and Development. The Institute has responsibility for all major regional development programs of the University. The Technology Application Center, in its new relationship, will be responsible for all technology extension programs including the administration of Technical Services within the State.

Marketing continued to receive major attention during the period with emphasis being placed on increasing the level of activity of current members and increasing ad hoc activity as well as developing new members. Three new members and six ad hoc users were added during the period and fourteen members increased their level of activity.

A national conference on Rolamite Technology was sponsored jointly with the Atomic Energy Commission's Office of Industrial Cooperation at Sandia Corporation. The conference attracted 125 people from twenty-six states and one foreign country (Norway).

The services of TAC were expanded during the first two quarters in several ways. Additional data bases were used to

provide clients with more comprehensive coverage. The Industrial program added a selective dissemination service based on NASA SCAN. The Natural Resources program added an application report service in the earth sciences.

As a result of advertising, orders for Gemini photography rose from just under 5,000 items in the first quarter, to almost 12,000 items in the second quarter.

TAC has participated in a number of other activities which have served to improve the competence and enhance the stature of the Center in the region.

QUARTERLY STATUS REPORT
Technology Application Center

July-September 1968
October-December 1968

Note: The Technology Application Center contract year began July 1, 1968. However, the TAC contract was not received until December; therefore, this status report covers two quarters

I. TAC OPERATIONS

A. User Activity

	<u>First Quarter</u>		<u>Second Quarter</u>		<u>First Half</u> <u>Total</u>
	<u>Programs</u> <u>N.R.</u>	<u>Ind.</u>	<u>Programs</u> <u>N.R.</u>	<u>Ind.</u>	
1. Annual Membership					
(a) Annual Members at beginning of quarter	11	19	10	20	
(b) *New Members	2	1	0	0	
(c) Attritions	3	0	0	0	
	10	20	10	20	<u>30</u>
(d) Annual Members at end of first quarter include 3 renewals and 1 in process of negotiation					
(e) Annual Members at end of second quarter include 4 renewals					
* Gates Rubber Company Denver, Colorado					
Gulf Research & Development Company Pittsburgh, Pennsylvania					
Martin Marietta Company Denver, Colorado					

	<u>First Quarter</u>		<u>Second Quarter</u>		<u>First Half</u> <u>Total</u>
	<u>N.R.</u>	<u>Ind.</u>	<u>N.R.</u>	<u>Ind.</u>	
2. Ad Hoc Services	1	1	2	2	<u>6</u>

B. Marketing

	<u>First Quarter</u>		<u>Second Quarter</u>		<u>First Half</u>
	<u>N.R.</u>	<u>Ind.</u>	<u>N.R.</u>	<u>Ind.</u>	<u>Total</u>
1. Sales trips conducted: including discussions in -	4	3	1	5	13
Denver, Colorado					
Phoenix, Tempe, Scottsdale, Arizona					
Salt Lake City, Utah					
Dallas, Houston, College Station, Texas					
Roswell, Albuquerque, New Mexico					
2. Initial TAC presenta- tions during quarter	14	9	3	16	42
3. Followup presenta- tions during quarter	13	14	5	14	46

C. Dissemination Activity

	<u>First Quarter</u>		<u>Second Quarter</u>		<u>First Half</u>
	<u>N.R.</u>	<u>Ind.</u>	<u>N.R.</u>	<u>Ind.</u>	<u>Total</u>
1. Retrospective Searches					
Computer	4	15	1	8	28
Manual	4	23	2	9	38
Computer/Manual	8	1	3	3	15
2. Selective Dissemination Service Profiles	37	41	38	48	164
3. Industrial Application Reports					
Issues	42	155	41	157	395
Copies	52	617	41	608	1,318
4. Tech Briefs					
Issues	140	120	147	143	550
Copies	140	2,822	147	3,362	6,471
5. Special Reports					
SP 5000's	4	34	9	91	138
6. Gemini Photography	4,616	0	11,536	0	16,152
7. Full Reports					
STAR		* 165	5	80	250
IAA		99	3	78	180
Other		0	16	52	68
*Combination figure-breakdown not available-					

D. Personnel

Total number of TAC employees - First Quarter - 11 full-time, 12 part-time
Second Quarter- 10 " 12 "

Breakdown:	<u>First Quarter</u>	<u>Second Quarter</u>
1. Administration	2	2
2. Natural Resources Program	5	5
3. Industrial Program	5	6
4. Information Services	9	8
5. Computer	1	1
6. Other (summer only)	1	0
	<u>23</u>	<u>22</u>

II. TAC PROGRAMS

A. General

1. Change in TAC/University organizational relationship

On July 1, 1968, The University of New Mexico, in order to formally recognize its growing responsibility and involvement in programs aimed at extending the University's resources and talents to the community, state, and region, created the Institute for Social Research and Development. In the Institute will be centered all major programs for action and research in the community. As initially established the Institute will house the Bureau of Business Research, the Center for Community Action Services, the Indian Community Action Program, the Division of Government Research, special projects in Public Finance, Education, and other areas, and the Technology Application Center. Under this new organization, TAC will assume responsibility for all Institute technology extension projects and as a result now has responsibility for the administration of the State Technical Services Program in New Mexico. Because of the multidisciplinary resources of the Institute, TAC feels that the new organizational relationship will strengthen its capability to transfer technology in this region.

2. Expanding the data base

During its first year and a half, TAC restricted itself primarily to the NASA information base as its source of technical information. Toward the end of last year it became apparent

that: first, many clients were only partially served and satisfied using this base; and second, the use of additional data bases would increase TAC's capability to market NASA technology to many potential clients. As a result, it was decided at the start of this contract year to begin using other data banks on a regular and more intensive basis. Additional sources currently being used include AEC, DOD, and other U. S. government agencies, special information centers, the University and other special libraries, and a growing list of trade, technical, and other associations. Since most other information bases require manual searching at this time, it is recognized that search and evaluation time will probably increase. Records are being kept, and during the second half of this year an analysis will be made to determine the effects of this approach on costs. Response from our users to date indicates that expanding the data base has materially improved customer satisfaction.

3. Rolamite Conference

A major activity of TAC during the first half was its participation in the preparation and presentation of a nationwide symposium on the Rolamite device invented at Sandia Corporation. The symposium was a joint effort by TAC and the Atomic Energy Commission's Office of Industrial Cooperation at Sandia. Its purpose was: (1) to review Rolamite development during the year that had followed announcement of the invention by the AEC; and, (2) to discuss

the current state-of-the-art of Rolamite design and application. Held in Albuquerque on November 12-13, 1968, the two-day symposium drew over 125 attendees and participants who came from twenty-six states and one foreign country (Norway). In addition to TAC and the Sandia Office of Industrial Cooperation, a substantial portion of the program was presented in cooperation with three industrial firms engaged in Rolamite technology. They were: Rolamite Technology, Inc., of San Francisco and Albuquerque; Technar, Inc., of Pasadena, California; and the Precision Metals Division of the Hamilton Watch Company of Lancaster, Pennsylvania. While the general comments of attendees following the symposium indicated that the conference was a success, a more definitive evaluation questionnaire has been mailed to all who attended. The results of this survey will be analyzed as soon as the returns are in. It is planned also to publish proceedings of the symposium. These should be ready by late February or early in March.

4. Kiplinger Letter followup

Just before the end of the second quarter TAC received the list of companies in its region which had responded to the NASA TU story in the Kiplinger Letter. A marketing campaign has been structured using this list, and the initial contact of these firms should begin early in 1969.

5. Rocky Mountain Technical Information Network

TAC is a member of a group, initiated by the Rocky Mountain

Technical Services Council and sponsored by the Federation of Rocky Mountain States, Incorporated, to develop a technical information network in the Rocky Mountain region. Composed of primarily Technical Services directors and regional librarians, TAC participates both as a NASA Regional Dissemination Center and as a Technical Services program. Although it is too early to determine the potential of this activity, TAC has already been complimented for its knowledge and leadership in this effort.

B. Natural Resources Program

1. Marketing

During the first two quarters the Natural Resources program concentrated its marketing effort in attending seminars related to the earth sciences and particularly remote sensing. TAC presentations were made at three such seminars during the period. The first was "Remote Sensing of the Environment" held at Colorado State University. This was attended by 125 individuals from all parts of the nation. The second was held by the Institute of Earth and Man, of Southern Methodist University, and drew an international audience of 200. TAC had the only display booth at this meeting. The third seminar was the Remote Sensing Short Course sponsored by the American Geological Institute in collaboration with the U. S. Geological Survey and the National Aeronautics and Space Administration, and held at the Manned Spacecraft Center, Houston, at which an

audience of 95 attended. As a result, of both these meetings and the followup marketing, the Natural Resources program has developed many more serious prospects for services.

Additional marketing has also been carried out through the Technical Services projects in the region, particularly in Texas, and the results have been gratifying.

2. Services

Natural Resources services have been improved and expanded in several ways during the first two quarters. A counterpart to the TAC Industrial Applications Report has been started for this program. This service, called TAC Action Reports, is a bi-monthly mailing, specifically Natural Resources technical reports and other information offered as idea stimulators on a for "what it's worth" basis. Reaction to these reports to date has been very favorable.

In addition to the general expansion of the TAC information base, the Natural Resources program has added "Selected Water Abstracts." TAC is the only non-governmental organization disseminating these Bureau of Reclamation publications to the general public. It has also added "Geological Abstracts Exclusive of North America."

Two new comprehensive retrospective searches are being developed. These new state-of-the-art surveys will cover Oceanography and Hydrology. Special searches in Remote

Sensing and Geothermal Phenomenon were previously developed.

Progress was also made in the compilation of an expertise list in the remote sensing area.

3. Gemini and Apollo photography

Orders for Gemini photography continue to climb rapidly, from just under 5,000 items in the first quarter to almost 12,000 in the second quarter. This increase is attributed mainly to advertising which has been conducted through a nationally circulated geoscience magazine.

Apollo 6 and 7 imagery was received from NASA during the latter part of the period and is now being processed for dissemination. The editing and cataloging time required, however, will delay dissemination until the third quarter. Stereo sequences from Apollo 6 are of special interest and one such pair will be used in a forthcoming advertisement.

4. Special projects

The U. S. Army Control and Disarmament Agency contacted TAC during the period relative to the publication of "Sensors", a current awareness abstract journal in remote sensing now being produced by the Battelle Memorial Institute. Discussions are continuing.

A preliminary proposal was made to the U. S. Geological Survey for evaluation of the use of remote sensing from orbiting satellites in Urban and Regional Planning and Development.

The project is a joint effort of TAC, the Geography Department, the Architecture Department, and the Geology Department of the University.

At the request of the U. S. Forest Service, a proposal is being prepared for establishing a geodetic control data bank at TAC.

Representatives of TAC attended a meeting with industrial, educational, and state government delegates to discuss the possibility of establishing a geohydrologic data base for the State of New Mexico. An advisory committee with TAC as a member was formed to continue the study.

The special project funded by NASA TU to evaluate the potential for dissemination of the aircraft data resulting from the NASA Earth Resources Survey Program, has made little headway. TAC has developed its evaluation program and detailed the required process, but as yet NASA has not made the data available for the evaluation. Although TAC has had numerous requests for dissemination of this data, the overall value for dissemination can not be estimated until further study can be made.

The joint TAC/Denver Research Institute survey of users of Gemini photography has also been slow in getting started. It is hoped that this important evaluation will begin shortly after the first of the year.

C. INDUSTRIAL PROGRAM

1. Marketing

The major emphasis of the Industrial program's marketing effort during the first two quarters was placed on assuring the renewal of present members and on increasing the amount of their memberships. This effort has been a success in both areas and a significant increase in income has resulted from add-on services to members. New members were also gained during the period and a number of serious prospects developed. Much of the renewal and expanded level of membership can be attributed to the use of an expanded information base.

Marketing efforts were also planned with the Technical Services programs in the region, and increased activity was received from the states of Texas, Arizona, and Nevada.

2. Services

In addition to expanding the information base, a new service was introduced during the first two quarters. Called Technical Interest Profiles (TIP's), the service is a current awareness service based exclusively on the NASA information base by reprocessing the NASA SCAN publications. Provided as either a back search, a monthly update, or both, the TIP's make TAC's current awareness services available at three price and comprehension levels. TIP's for NASA information only, on a standard subject basis; ARAC SIP's for NASA, AEC, DOD,

and other government information on a standard subject basis; and TAC's custom profiles for comprehensive coverage on a standard subject basis; and TAC's custom profiles for comprehensive coverage on a personalized basis. Each service, of course, costs progressively more.

3. Special projects

A major project of special significance was undertaken with the Denver Research Institute during the period. Under this project, the Denver Research Institute - NASA TU program purchased a six month membership in TAC and provided free TAC services to the physical science divisions of the Institute. TAC has provided its normal services to these divisions, and at the end of the six months the NASA PATT project at DRI will evaluate the results, both from the standpoint of the quality of the TAC services and also from the viewpoint of how well a research institute makes use of the potential of a service such as TAC's. The evaluation is expected to be completed by the end of the third quarter.

With the creation of the Institute for Social Research and Development at The University of New Mexico, and TAC's added responsibility for administration of the Technical Services program for New Mexico, the Industrial program has taken on additional duties. As of July 1, 1968, the Industrial program of TAC is responsible for operating the STS Field Service project. This puts TAC in direct contact

with the small businessman and manufacturer in the state and provides an opportunity for community service not practical under the NASA Regional Dissemination Center program. The Industrial program also continues to operate the STS Technical Information Dissemination project in New Mexico, and has developed a unique program for this project.

III. OTHER CENTER ACTIVITIES

- A. The Director of TAC was appointed to membership on the Executive Committee of the Albuquerque Research Council. The Council is sponsored jointly by the Albuquerque Industrial Development Service, Inc., (AIDS), the Industrial Foundation of Albuquerque, Inc., (IFA), and the Greater Albuquerque Chamber of Commerce. Among the Council's purposes are the gathering, analyzing, and coordinating of facts for use in bringing new industry to New Mexico.
- B. TAC's Director was selected as a University of New Mexico participant in the Albuquerque Urban Policy Conference Program. Sponsored by the Brookings Institution and the Albuquerque business community, the Conference consists of thirteen meetings held from October through June, 1969.
- C. TAC's Director attended and participated in the Office of State Technical Services National Conference in October, 1968, and addressed the group on "TAC Information Services."

- D. The Assistant Director of TAC's Industrial Program, Walter Long, together with the Director, participated in the Albuquerque Industrial Forum and presented to the Forum a briefing on TAC's services and resources; the Forum took place in August.
- E. In July, the Assistant Director of TAC's Natural Resources program, Thomas Lyons, consulted with and assisted the Curator of the Albuquerque Museum in its preparation of a Space Science Exhibit.
- F. In October, Walter Long delivered the banquet address to the Annual Meeting of the New Mexico Business and Manufacturer's Association on the subject of "Fallout from Space."
- G. In October, Dr. Rauner, Regional Economic Development Institute, Washington, D.C., visited the University. TAC's Director briefed Dr. Rauner on the operation of TAC and its potential for sharing in the Four Corner Regional Development Commission's planning.
- H. In October, Walter Long attended a two day state-wide Industrial Development Conference and Workshop in Roswell, New Mexico.
- I. An LTV Discussion Meeting on "Programmed Teaching Methods", aimed at training underemployed to higher levels of technical competence was held in Albuquerque in November. Walter Long participated in this meeting.

J. Significant Visitors

1. First Quarter

Mr. Charles Bingman, Special Assistant, Office of Organization and Management, NASA -

Mr. Jean-Pierre Puissechet, Auditeur au Conseil d'Etat, and Administrative Counsellor and Legal Adviser to the Directeur General du Centre National d'Etudes Spatiales, Paris, France -

Messrs. Faugere and Elbaz, Directors of CNES Research, Toulouse, France -

Jacques Tizious, Astronautics Editor of Aviation Magazine, Paris, France -

Bruce Gipson, the new TU Officer, Southwestern region Small Business Administration -

2. Second Quarter

Dr. Rauner, of the Regional Economic Development Institute, Washington, D. C. -

Mr. Joseph Carlson, Office of Technology Utilization, NASA Headquarters, Washington, D. C. -

Mr. Roy Bivens, Office of Technology Utilization, NASA Headquarters, Washington, D. C.

REGIONAL DISSEMINATION CENTER INCOME BY SOURCE

END OF SECOND QUARTER

Thousands of Dollars	NASA	INDUSTRY	OTHER-PHOTOS
200,000			
187,500			
162,500			
150,000			
137,500			
125,000			
112,500			
100,000			
87,500			
75,000			
62,500			
50,000			
37,500			
25,000			
12,500			

REGIONAL DISSEMINATION CENTER ANNUAL MEMBER CLIENTS BY PRIMARY SIC CODE

Note:
Some clients have more than one
primary SIC Code

TOTAL

3674

2899

2892

8999

3662

3611

3679

3663

3842

3533

4931

8911

1082

1382

3722

1328

1321

7391

3069

3269

3229

8921

4th Q

1968

3rd Q

1968

STANDARD INDUSTRIAL CLASSIFICATION CODE

MEMBER CLIENTS

[illegible]

REGIONAL DISSEMINATION CENTER MARKETING APPROACHES

TYPE	1968 1st Q	1968 2nd Q	1968 3rd Q	1968 4th Q
DIRECT MAIL			83	224
PERSONAL PRESENTATIONS			55	30
GROUP PRESENTATIONS			3	6
ADVERTISEMENTS			1	2
Prospect PERIODIC CLIENT CONTACTS			191	312
JOURNAL/MAGAZINE ARTICLES			-0-	0
TELEPHONE			45	83

REGIONAL DISSEMINATION CENTER MARKETING/SERVICE CONTACT WITH CLIENTS

CLIENT	TYPE CONTACT	1968 1st Q	1968 2nd Q	1968 3rd Q	1968 4th Q
TECHNICAL (Applications Engineers)	TELEPHONE			55	183
	VISIT			7	14
	MAIL			30	64
MARKETING	TELEPHONE			18	65
	VISIT			3	19
	MAIL			60	120

4th Q

1968

3rd Q

1968

[illegible]

*Other than Tech Briefs, Industrial Applications Reports, et cetera

4th Q

1968

3rd Q.

1968

0	0	0	0	0	0	3	6	1	1	0	0	2	0	0	0	2	0	0	0	2	1	0	0	0	2	0	2	0	0	
0	0	5	1	0	2	6	5	2	6	0	0	5	2	3	0	1	2	0	2	2	0	0	0	2	0	0	0	0	3	2
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STAR™ / TAA CATEGORY

ABSTRACTS RELATIVE TO MICROFORM OR HARD COPY DOCUMENTS ISSUED

	3rd Qtr 1968				4th Qtr 1968			
ABSTRACTS					29,323			20,898
DOCUMENTS					264			234